

CLAIMS

1 1. A method of controlling communication resources in a transmission from a
2 first network element to a second network element, where the communication resources are
3 allocated by a controller, comprising:

4 monitoring an indication of future need of communication resources in said first
5 network element;
6 sending the indication from the first network element to the controller;
7 controlling the communication resources between the first network element and
8 the second network element based on this indication.

1 2. The method according to claim 1, wherein the first network element is
2 connected to the controller by way of the second network element.

1 3. The method according to claim 1, wherein the indication includes information
2 about a transmit buffer of the first network element.

1 4. The method according to claim 1, wherein the indication includes information
2 on the additional resources needed for said first network element.

1 5. The method according to claim 3, wherein the indication includes a
2 quantization scheme whose values correspond to predefined amounts of resources.

1 6. The method according to claim 4, wherein the indication includes information
2 about a transmit buffer of the first network element.

1 7. A method according to claim 1, wherein the first network element is a mobile
2 station and the second network element is a base station of a wireless communication network.

1 8. A system for controlling communication resources in a network, comprising:
2 a plurality of first stations;
3 a second station connected to said plurality of first stations through a plurality
4 of communication links;
5 a controller for controlling the allocation of said communication resources
6 among said links;
7 said allocation being performed in accordance with information transmitted
8 from said first stations which indicates a need for communication resources.

1 9. The system according to claim 8, wherein said controller is part of said base
2 station.

1 10. The system according to claim 8, wherein said first stations are mobile stations
2 in a wireless network.

1 11. The system according to claim 8, wherein each of said plurality of first stations
2 includes:
3 a data generator;
4 a data queue;
5 an encoder for generating a code representative of the length of the data queue;

1 a transmitter for transmitting said data with said code included therein as a
2 field.

3 12. The system according to claim 8, wherein said base station includes a receiver
4 for receiving a transmission and producing data;
5 a decoder for decoding a field of said data and producing an indication of the
6 data queue in an associated first station;

7 wherein said controller receives said information from said decoder and
8 allocates communication resources in accordance therewith.

13. The system according to claim 8, wherein said indication is provided for each
2 data block transmitted.